



RS1AW~RS1MW

SURFACE MOUNT FAST RECOVERY RECTIFIER

VOLTAGE 50 to 1000 Volts **CURRENT** 1.0 Ampere

SMA-W

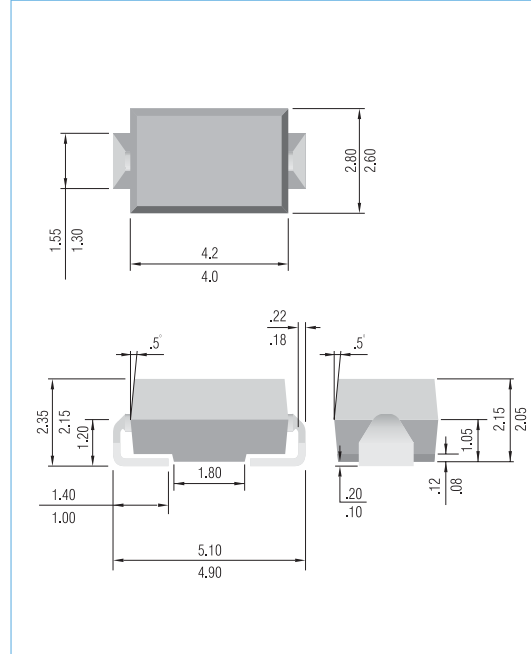
Unit: mm

FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Fast Recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Pb free product : 99% Sn above can meet RoHS environment substance directive request

MECHANICAL DATA

- Case: SMA-W molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750D, Method 1036.3
- Polarity: Indicated by cathode band
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.002 ounce, 0.064 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| PARAMETER | SYMBOL | RS1AW | RS1BW | RS1DW | RS1GW | RS1JW | RS1KW | RS1MW | UNITS |
|--------------------------------------------------------------------------------------------------------|------------------------------------|-------------|-------|-------|-------|-------|-------|-------|-----------------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 800 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Rectified Current at $T_L=90^\circ\text{C}$ | $I_{F(AV)}$ | 1.0 | | | | | | | A |
| Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method) | I_{FSM} | 30 | | | | | | | A |
| Maximum Forward Voltage at 1.0A | V_F | 1.3 | | | | | | | V |
| Maximum DC Reverse Current $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=125^\circ\text{C}$ | I_R | 5.0 150 | | | | | | | uA |
| Maximum Reverse Recovery Time (Note 1) | t_{rr} | 150 | | | | 250 | 500 | | ns |
| Maximum Junction capacitance (Note 2) | C_J | 12 | | | | | | | pF |
| Typical Junction Resistance(Note 3) | $R_{\theta JA}$ $R_{\theta JL}$ | 100 32 | | | | | | | $^\circ\text{C} / \text{W}$ |
| Operating Junction and Storage Temperature Rating | T_J, T_{STG} | -55 TO +150 | | | | | | | $^\circ\text{C}$ |

NOTES:1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

2. Measured at 1 MHz and applied $V_r = 4.0$ volts.

3. 8.0 mm² (.013mm thick) land areas.



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RATING AND CHARACTERISTIC CURVES

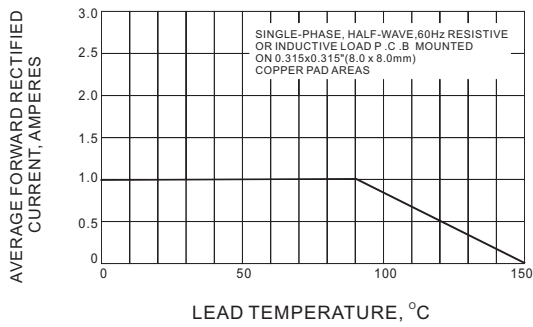


Fig.1 FORWARD CURRENT DERATING CURVE

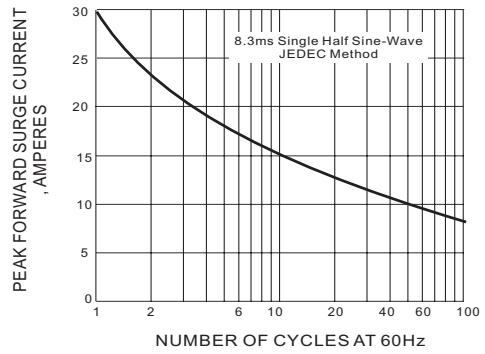


Fig.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

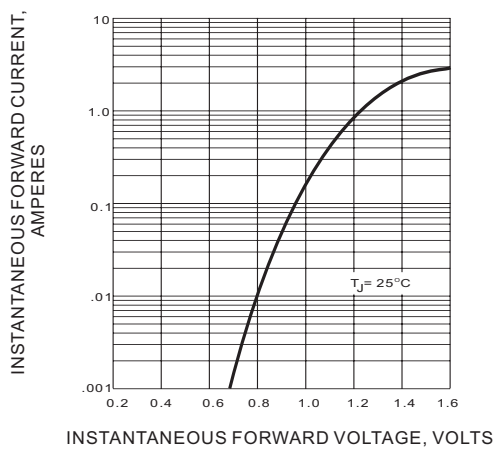


Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

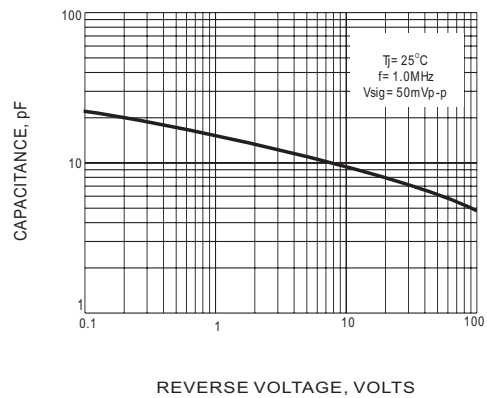


Fig.4 TYPICAL JUNCTION CAPACITANCE

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